



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/516,542

12/02/2004

Osamu Ochino

Q85102

6989

23373

7590

12/12/2006

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/516,542

Applicant(s)

OCHINO, OSAMU

Examiner

Geoffrey L. Knable

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1733

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 2-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In new claim 14, lines 3-4, the reference to "a single steel cord" in the context of this step (option (1)) is not disclosed in the original disclosure and thus represents subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter.

In claim 14, line 9, the new reference to "spirally winding the belt layer on a rotating support" represents subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. While the original disclosure does disclose spirally winding of an extruded band-shaped uncured rubber composition (apparently to form the belt layer), it is not seen where the original disclosure describes or supports spirally winding the belt layer itself.

Art Unit: 1733

3. Claims 2-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is maintained for mostly the same reasons noted in the last office action, the amendments to the claims presenting several new ambiguities as well. In particular, reference is made in new claim 14 to forming the belt layer by "successively laminating," "affixing" and "while shaping and affixing it" - it however is not understood what steps are being referenced here. For example, in the "successive laminating" step (1), what is being laminated with what? Are the cords being laminated to the rubber or is this referring to some other laminating? In alternative (2), what are these cords being affixed to? In alternative (3), what is this "shaping and affixing"? What is being shaped? What is being affixed to what? Further, again, are these steps referring to formation of a belt layer or formation of a band or some other subcomponent that is to be made into a belt layer? Also, are these referring to steps to form a subcomponent or are they referring to actually steps of building the tire (i.e. are the "laminating" or "affixing" steps referring to laminating or affixing to the other parts of the tire being built or simply laminating/affixing cord and rubber to each other)? These steps and how they fit into how a tire and/or a tire belt are built are thus still very indefinite and confusing and must be clarified.

The new reference to "spirally winding the belt layer on a rotating support" in claim 14, line 9 further confuses these issues. The term "belt layer" was originally used in the specification to apparently refer to an entire belt layer (as typical in this art). With

Art Unit: 1733

this new indication that the "belt layer" is spirally wound on a support, it is now not clear even what a "belt layer" is (note also the new matter rejection above). In other words, a belt layer is typically the full width of the tire and thus would not and could not be spirally wound and thus this step renders the claimed process entirely confusing. Further, if this is intended to refer to spirally winding a band-shaped member, how do the claimed alternative steps fit into this? Also, again, if spirally winding a band-shaped member to form a tire belt, then the claimed spiral winding could only form belt layers with essentially zero degree layers - is this what is intended? Clarification of these issues is required in order to understand the intended scope of these claims

Claim 2 refers to the properties being after vulcanization - again, clarification is required as to whether this also applies to the viscosity as it would not seem to but the claim at present can be read to say that all the properties *including viscosity* are after vulcanization.

4. Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Sandstrom et al. (US 5,394,919) or Ravagnani et al. (US 4,239,663).

Although the scope of the present claims remains indefinite as noted above, it now seems clear at least that the claims are not requiring extrusion and spiral winding of non-reinforced rubber materials to form the tire and thus the references to Laurent and Mitsunashi et al. have been removed from the rejection. GB '426 to Bekaert, which suggests spirally winding a strip including steel cords to form a tire belt layer, is however

Art Unit: 1733

retained and applied, along with the cited secondary references, for the same reasons as set forth in the last office action.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of EP 481080 to Nakagawa et al. and (for claims 2 and 9-13 only) optionally further in view of at least one of [Sharma (US 4,615,369) and Vasseur (US 5,871,597)].

Although the scope of the present claims remains indefinite as noted above, as it now seems clear at least that the claims are not requiring extrusion and spiral winding of non-reinforced rubber materials to form the tire, the references to Laurent and Mitsuhashi et al. have been removed from this rejection. GB '426 to Bekaert, which suggests spirally winding a strip including steel cords to form a tire belt layer, is however retained and applied, along with the cited secondary references, for the same reasons as set forth in the last office action.

6. Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Grimberg et al. (US 2003/0221760) or Uchino et al. (US 2002/0088522).

Although the scope of the present claims remains indefinite as noted above, it now seems clear at least that the claims are not requiring extrusion and spiral winding of non-reinforced rubber materials to form the tire and thus the references to Laurent and Mitsuhashi et al. have been removed from the rejection. GB '426 to Bekaert, which suggests spirally winding a strip including steel cords to form a tire belt layer, is however

Art Unit: 1733

retained and applied, along with the cited secondary references, for the same reasons as set forth in the last office action.

7. Applicant's arguments filed 9-22-2006 have been fully considered but they are not persuasive.

The previous 35 USC 112, first paragraph rejection has been withdrawn in view of the amendments to the relevant claims. Note however the new 35 USC 112, first paragraph rejections necessitated by the amendments to the claims. As to the 35 USC 112, second paragraph rejections, note the statement of rejection above.

As to the prior art rejections, it is argued that

"The rubber composition as claimed in claim 14 has a low viscosity and a good workability, in particular, at the uncured state. In the present invention, this low viscosity rubber composition is used to form a belt by one of the methods, (1), (2), or (3) recited in claim 14.

Applicants submit that the rubber composition disclosed in Sandstrom and Ravagnani, as well as Nakagawa, Sharma, or Vasseur, is not the same as the claimed rubber composition. In particular, the rubber composition disclosed in Sandstrom and Ravagnani has a high viscosity in its uncured state. Due to its high viscosity, it is not possible to use the rubber composition to form a belt layer by any of the methods (1), (2), or (3), recited in claim 14. On the contrary, in order to coat the steel cords with this uncured rubber disclosed in Sandstrom and Ravagnani a calendering apparatus must be used."

It is first noted, however that claim 14 does not characterize the composition by its viscosity or workability and thus these arguments are not commensurate in scope with the claims. Further, although not conceded, it is also noted that even if using the compounds of Sandstrom or Ravagnani were to require calendering as argued, it is not seen what in methods (1), (2) or (3) in any way excludes calendering. As to the viscosity of claim 2, such was treated in the last office action, applicant not specifically addressing the specific rejection in this regard. The rejections over the other references

Art Unit: 1733

are maintained for reasons of record, no specific arguments being given other than that they do not teach a composition as claimed. These rejections are maintained for the reasons of record.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

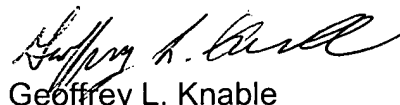
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
December 9, 2006